
CAPSTONE PROJECT

FITNESS BUDDY

Presented By

Student name : Vijay Vengatesan

College Name & Department : Jerusalem College Of Engineering&Information Technology

OUTLINE

- Problem Statement
- Technology used
- Wow factor
- End users
- Result
- Conclusion
- Git-hub Link
- Future scope
- IBM Certifications

PROBLEM STATEMENT

Many people struggle to stay healthy due to lack of time, motivation, and personalized fitness guidance.

Traditional fitness options are often expensive, rigid, and not tailored to individual needs.

There's a need for an accessible, intelligent assistant that supports healthy living anytime, anywhere.

Proposed Solution:

Fitness Buddy is an AI-powered virtual assistant that offers personalized home workouts, meal ideas, and motivation.

It adapts to user goals and schedules, making fitness support simple and flexible.

Built with IBM Cloud Lite Services and Granite model, it's available anytime through a conversational interface.

TECHNOLOGY USED

- IBM Cloud Watsonx AI Studio
- IBM Cloud Watsonx AI runtime
- IBM Cloud Agent Lab
- IBM Granite foundation model

WOW FACTORS

- Powered by the **IBM Granite Foundation Model** for intelligent, human-like responses
- Uses **custom in-agent tools** to generate workouts, meals, and motivational tips
- Fully **conversational and personalized** based on user input
- Operates **24/7** — always available as a virtual fitness coach
- Works entirely on **IBM Cloud Lite plan** — no cost, no paid APIs
- **No RAG or external retrieval** — logic and content are embedded
- Deployed via **watsonx Runtime** for reliable, cloud-native performance
- Built using **IBM watsonx.ai Agent Lab** with no external dependencies

END USERS

- Busy Professionals
- Home-Based Fitness Enthusiasts
- Students
- Remote Workers & Freelancers
- Beginners & Seniors
- Wellness Seekers

RESULTS

BUILDING STAGE

Build

AI Model: mistral-large ⚠️

<

Setup

Configuration

Framework

LangGraph

Architecture

ReAct

Instructions

Advanced configuration

Knowledge

Tools

Add a tool

Create custom tool

Added tools (0)

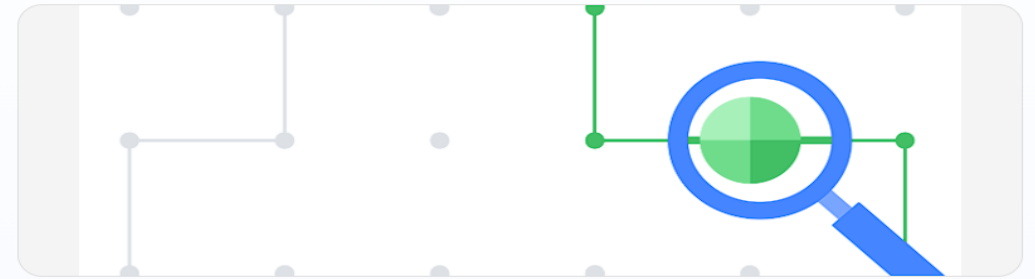
Agent preview



watsonx Agent 10:32 PM

Welcome to watsonx Agent

Change this description to reflect your particular agent



Type something...



RESULTS

INITIALIZATION OF AGENT

Build

AI Model: mistral-large ⚠️

<

Setup

Configuration

Framework

LangGraph

Architecture

ReAct

Instructions

- Suggesting nutritious meal ideas that are simple and easy to prepare
- Providing motivational tips to encourage daily fitness and healthy habits
- Supporting habit-building by giving reminders, encouragement, and small goal suggestions

Advanced configuration

Knowledge

Tools

Add a tool

Create custom tool

Added tools (0)

Agent preview

You: 10:34 PM

hi

watsonx Agent 10:34 PM

Hi! I'm Fitness Buddy, your personal AI health coach. How can I help you stay fit today?

↺

Type something...

RESULTS

WORKING AGENT



Build >

Agent preview



You: 10:30 PM

"I have 15 minutes and want to focus on fat burning. Can you suggest a home workout routine?"



watsonx Agent 10:30 PM

Hi! I'm Fitness Buddy, your personal AI health coach. How can I help you stay fit today?

Sure, I can help with that! Here's a quick 15-minute home workout routine focused on fat burning. This routine will include a mix of cardio and strength exercises to maximize calorie burn.

Warm-up (2 minutes):

- Jumping jacks: 30 seconds
- High knees: 30 seconds
- Arm circles: 30 seconds
- Hip rotations: 30 seconds

Workout (12 minutes): Perform each exercise for 45 seconds, followed by 15 seconds of rest. Complete the circuit 3 times.

1. Burpees
2. Mountain climbers
3. Squat jumps
4. Push-ups

Type something...



RESULTS

Projects / Fitness Buddy / watsonx Agent

Share feedback

β

Autosaved 10:31 PM

📄 ▼

New agent +

Deploy

🔗

🔒

ℹ️

🗂️

Build >

Agent preview

👤

- Arm circles: 30 seconds
- Hip rotations: 30 seconds

Workout (12 minutes): Perform each exercise for 45 seconds, followed by 15 seconds of rest. Complete the circuit 3 times.

1. Burpees
2. Mountain climbers
3. Squat jumps
4. Push-ups
5. Alternating lunges
6. Bicycle crunches

Cool-down (1 minute):

- Gentle stretching of major muscle groups (hamstrings, quadriceps, chest, and back)

Remember to listen to your body and modify the exercises as needed. Stay hydrated and enjoy your workout!

Let me know if you need any further assistance or motivation! 🙌 😊

🔄

Type something...

🗨️

➤

CONCLUSION

- Demonstrates the power of AI in promoting healthy lifestyles
- Provides personalized fitness and nutrition guidance through conversation
- Built entirely using IBM Cloud Lite and watsonx technologies
- Accessible anytime, anywhere—no subscriptions or complex setup required
- Encourages habit-building, motivation, and wellness for diverse user groups

GITHUB LINK

GitHub Link: https://github.com/vijayvengatesan/IBM_Internship

FUTURE SCOPE

- Multilingual Support
- Mobile App Integration
- User Profile Learning
- Workout & Diet Scheduling
- Progress Tracking Dashboard
- Video Workout Suggestions
- Integration with Wearables

IBM CERTIFICATIONS

In recognition of the commitment to achieve
professional excellence



Vijay Vengatesan

Has successfully satisfied the requirements for:

Getting Started with Artificial Intelligence



Issued on: Jul 20, 2025
Issued by: IBM SkillsBuild

Verify: <https://www.credly.com/badges/057a9073-6c8d-4dd4-bbc0-2cadd1a31c09>



IBM CERTIFICATIONS

In recognition of the commitment to achieve
professional excellence



Vijay Vengatesan

Has successfully satisfied the requirements for:

Journey to Cloud: Envisioning Your Solution



Issued on: Jul 21, 2025
Issued by: IBM SkillsBuild

Verify: <https://www.credly.com/badges/1ec85583-b79e-44e6-bfc0-c546f617f05e>



7/24/25, 1:12 PM

Completion Certificate | SkillsBuild

IBM **SkillsBuild**

Completion Certificate



This certificate is presented to

Vijay Vengatesan

for the completion of

**Lab: Retrieval Augmented Generation with
LangChain**

(ALM-COURSE_3824998)

According to the Adobe Learning Manager system of record

Completion date: 24 Jul 2025 (GMT)

Learning hours: 20 mins



THANK YOU